

### **REMARKS**

The drawings were objected to as failing to comply with 37 CFR 1.84(p)(4). Claim 18 was objected to because of informalities. Claim 28 was rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. Claims 15 to 19 and 21 to 28 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,625,657 to Gallacher (hereinafter "Gallacher"). Claim 20 was rejected under 35 U.S.C. §103(a) as being unpatentable over Gallacher.

Claims 16 and 17 are hereby amended to correct typographical errors. Claims 18 and 28 are hereby amended to more particularly and distinctly claim the invention.

Reconsideration of the application based on the following remarks is respectfully requested.

#### **Drawing Objections**

The drawings were objected to as failing to comply with 37 CFR 1.84(p)(4) because the Examiner perceived that reference characters "11" and "33" both designated guide tubes. The specification has been amended to correct a typographical error and now it is clear that guide tubes are represented by reference label 11 and the welding tabs are represented by reference label 33.

Withdrawal of the objection to the drawings is respectfully requested.

#### **Claim Objections**

Claim 18 was objected to because the word "reinforcing" was misspelled in line 3. Claim 18 has been amended to correct this error.

Withdrawal of the objection to claim 18 is respectfully requested.

#### **35 U.S.C. §112 Rejections**

Claim 28 was rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. Claim 28 has been amended to more particularly and distinctly claim the invention. Claim 28 now complies with 35 U.S.C. §112, first paragraph.

Withdrawal of the rejection of claim 28 under 35 U.S.C. §112 is respectfully requested.

35 U.S.C. §102 Rejections

Claims 15 to 19 and 21 to 28 were rejected under 35 U.S.C. §102(b) as being anticipated by Gallacher.

Gallacher discloses a method for repairing a nuclear fuel rod assembly with damaged fuel rod and/or a damaged spacer. The “nuclear fuel rod assembly having a plurality of spaced apart grid spacers comprising an arrangement of a first plurality of grid strips intersecting each other to form a first plurality of spacer cells through which fuel rods extend and for maintaining the fuel rods in a predetermined position within said assembly, an upper tie plate located at the top of said assembly, and a grid spacer having a damaged spacer cell.” (Col. 2, lines 29 to 36).

Claim 15 recites “[a] nuclear fuel assembly comprising:  
a group of nuclear fuel rods and a support skeleton, the assembly comprising:

two nozzles;

guide tubes interconnecting the nozzles; and

spacer grids secured to the guide tubes and serving to hold the rods;

the nuclear fuels rods extending along a longitudinal direction and being disposed in a substantially regular array;

the assembly including at least one support skeleton reinforcing device disposed between two successive spacer grids and secured to the guide tubes, and the reinforcing device being disposed inside the group of rods and presenting a transverse extent that is less than the transverse extent of the array of rods.”

Gallacher fails to teach or show “at least one support skeleton reinforcing device disposed between two successive spacer grids and secured to the guide tubes” (emphasis added) as required by claim 15. The Office Action asserts in section 7 on page 4 that in Gallacher the “guide tubes are secured to the fuel rods and the reinforcing device is secured to the fuel rods; thus the guide tubes are indirectly secured to the reinforcing device.” However,

this is not correct because the guide tubes 14 are not secured with respect to the fuel rods 16 in Gallacher. Sliding is permitted between the fuel rods 16 and the spacer grids 18 of Gallacher, and therefore sliding also occurs between the guide tubes 14 which hold the spacer grids 18. Gallacher specifically states that “[s]pacers or spacer grids which provide lateral bracing are typically designed to allow differential axial expansion of the fuel rods. Springs incorporated in the spacer grids are most frequently used to permit some sliding of the fuel rods with respect to the spacer grids. In some of the designs, the spacer grid is free to move axially a small amount to accommodate minor changes in the axial length of the fuel rods during irradiation.” (Col. 1, lines 46 to 53) (emphasis added). Therefore, since Gallacher does disclose a support skeleton reinforcing device that is secured to guide tubes, it does not teach all limitations of claim 15, Gallacher cannot anticipate claim 15.

Withdrawal of the rejection of independent claim 15 and claims 16 to 19 and 21 to 28, dependent on claim 15, under 35 U.S.C. §102(b) is respectfully requested.

### 35 U.S.C. §103 Rejections

Claim 20 was rejected under 35 U.S.C. §103(a) as being unpatentable over Gallacher.

Claim 20 is dependent on claim 19, which in turn is dependent on claim 15. Thus, in light of the discussion above regarding independent claim 15, withdrawal of the rejection of claim 20 under 35 U.S.C. §103(a) is respectfully requested.

**CONCLUSION**

It is respectfully submitted that the application is in condition for allowance and applicants respectfully request such action.

If any additional fees are deemed to be due at this time, the Assistant Commissioner is authorized to charge payment of the same to Deposit Account No. 50-0552.

Respectfully submitted,

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